THE VETERINARY RECORD

A Weekly Journal for the Profession.

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

No. 1346. APRIL 25, 1914. VOL. XXVI.

THE DOGS' PROTECTION BILL.

Last week a Bill designed to abolish scientific experiments upon dogs passed its second reading in the House of Commons. A memorial has been sent in against it, signed by men of the highest standing in all branches of medicine, including Sir John M'Fadyean and Prof. Charnock Bradley in our own department. Nevertheless, the Bill will probably become law, and in that case the progress of both human and veterinary medicine in this country will be set back. Veterinary medicine will be especially handicapped, and in one important direction it will be brought to a standstill—for this Bill will debar research into the etiology and prevention of distemper. Research work upon distemper is being done in England now, and no disease stands in greater need of research. Distemper distroys more than half the dogs that are born, and in Germany is aptly designated "the dog scourge." That all attempts either to discover its cause or to immunise dogs against it should be prohibited in England by the action of professed dog-lovers is surely one of "life's little ironies."

FOOT-AND-MOUTH DISEASE AT BIRKENHEAD.

On February 26 last three veterinary officers of our Board of Agriculture—Sir Stewart Stockman, Mr. A. M. Munro, and Mr. W. J. Young—and three of the Irish Veterinary Department—Messrs. D. S. Prentice, J. S. Norris, and J. Purdy—held an official conference at Birkenhead with regard to the outbreak of foot-and-mouth disease there earlier in the same month. The result has now appeared in the form of a somewhat unsatisfactory official report.

A complete agreement was not reached. The English representatives were agreed, and signed a report of their own. Mr. Prentice, while in agreement with the major part of this, yet differed so far in some respects that he prepared an independent report, which was also signed by his two colleagues. These two reports, with some minutes of the proceedings, make up the whole publication, and, as the minutes are incomplete and only partially verbatim, they can scarcely assist in deciding between the two conflicting opinions.

It will be remembered that on January 30th and February 1st foot-and-mouth disease was discovered at two centres in the Irish County of Kildare. The English authorities at once prohibited the landing of Irish animals otherwise than for slaughter within the landing place. Nearly a fortnight later disease began to appear at Birkenhead in animals which had landed from Ireland and were awaiting slaughter. Fourteen cargoes in all were implicated. Naturally it was inferred at first that infection had come from Ireland, but subsequent developments cast a doubt on this view.

A quotation from the minutes summarises the problem dealt with at the Conference. "That foot-and-mouth disease has existed at Birkenhead is not disputed. All the evidence at first available pointed to the probability that the infection had been introduced by animals carried from Ireland. Since, however, no fresh disease centre has come to light in Ireland, the question has arisen as to whether it is possible that the infection can have been introduced into the lairages at Birkenhead by some other means or from some other source."

The net result of the Conference was to lessen the suspicion of infection having come from Ireland; and the real point of disagreement was the question whether any suspicion could be said to remain. The English representatives consider that "it is not possible to exclude the view that infection may have been introduced from Ireland"—but they do not affirm the view as a probability.

Mr. Prentice, on the other hand, claims that "the evidence clearly shows that the disease was not brought from Ireland to Birkenhead." It was agreed that none of the animals were found diseased upon landing; but, if they all became infected at Birkenhead, some of the periods of incubation were certainly unusually short.

Mr. Prentice explains this as arising from the debilitating effects of the journey and the virulent type of the outbreaks—for at Birkenhead the disease assumed a virulent form. Mr. Prentice emphasises two other points. The most careful search amongst animals in Ireland which had been in contact with those afterwards found affected at Birkenhead failed to unearth any disease amongst them. Further, though other animals, many from the same parts of Ireland as the Birkenhead cargoes, were shipped at the time to half-a-dozen other British ports, disease appeared at no port except Birkenhead.

Upon the whole the conference was disappointing. As an illustration of the practical complexities of animal epidemiology, the report makes really interesting reading. Incidentally, too, it elucidated a chain of circumstantial evidence which renders it almost certain that the outbreak of disease discovered at Redditch on February 22nd was due to infection at Birkenhead. But as an enquiry into how Birkenhead itself became infected, the results were absolutely negative. Perhaps a longer conference might have been more valuable, one day was a very short time to deal with the mass of complicated details that had to be considered, and further discussion might at least have produced a united report.

ABSTRACTS FROM FOREIGN JOURNALS

A New Equine Verminous Enteritis.

Cuillé, Marotel, and Roquet have published (*Revue Gén de Méd. Vét.*) the following observation. The subject was a foal, coming from a breeding establishment which had already repeatedly lost animals from the same disease.

This foal had been brought up upon the pasture, and showed every appearance of health. Suddenly, however, he was attacked by very severe colicky pains, which lasted twenty-four hours. From that time, although the appetite was maintained, the animal fell away in condition and became so feeble that, having lain down, he was unable to rise again without help. When brought to his feet again, he neighed, played, and ate like a normal foal.

The mucous membranes were very pale, and the conjunctival slightly œdematous. The temperature was 99.5°F. The faeces were fairly well moulded, but badly digested. They contained numerous intact oat-grains and coarse *débris* of fodder. When examined microscopically, they were found to contain numerous eggs of strongylides—twenty to thirty in each preparation.

The appetite soon became capricious. An œdema then appeared, which was localised at first to the four limbs, and then extended progressively upwards. The scrotum, the sheath, and the inferior aspect of the abdomen became infiltrated in their turn, and the foal assumed the aspect of an anasarcous subject. This condition persisted for ten days; and then a profuse and fetid diarrhœa appeared, and caused death in forty-eight hours.

Post-mortem lesions were found upon the whole extent of the intestine. The mucous membrane, when freed from alimentary materials, appeared riddled by a multitude of small dark cysts of from half a millimetre to two millimetres (=1-50 inch to 1-12 inch) in diameter. They were scattered irregularly upon the mucous membrane, and were very closely approximated together—twenty-five to thirty could be counted in a square centimetre (=4-10 inch). The larger ones were translucid, rounded or oval in form, slightly projecting, and limited by a blackish-grey ring.

Scrapings from these cysts were found to contain larvæ of nematodes. The wall of the intestine was thick and firm, and had not changed its colour, with the exception of showing some dark red ecchymoses.

Histological examination of the cysts showed that they were situated in the interior of the mucous membrane. They were oval or polyhedral in form, and surrounded by the adenoid tissue of the mucous membrane. Their walls, which were thin, were constituted by closely packed connective tissue fibres. In the interior of the cysts the parasites could be seen, cut in all directions by the section, and the details of their structure could thus be studied. One specially notable feature of the parasites was the abundant pigmentary granulations they contained.

Embryos of the parasites were found situated in the thickness of the adenoid tissue, *without* cystic formation. Some of these embryos had crossed the muscularis mucosæ and were found in the submucous tissue. The submucous tissue was sclerosed, and infiltrated with leucocytes. The blood-vessels were chronically inflamed, which the authors attribute to the irritant action of the neighbouring parasites or of their toxins.

In the *lumen* of the intestine, numerous adult worms (*cylicostomes*) were found, together with larvæ identical with those found in the thickness of the mucous membrane. The authors explain the method of infection and the course of the disease as follows: The worms arrive in the intestine as free embryos, probably by means of impure drinking water taken in humid marshy pastures.

These embryos penetrate into the intestinal mucous membrane, where they develope, thereby causing the formation of cystic cavities. The cysts finally open into the intestine, where the parasites undergo a further metamorphosis into perfect *cylicostomes*. Copulation takes place in the intestine. The females soon lay their eggs, which are then discharged by the host with the fæces, and which, if they fall into humid surroundings, produce embryos which may, by means of water, be re-introduced into the intestines of other foals.

This observation shows the gravity and importance of a new verminous enteritis. It is especially to be noted that the principal lesions are due to the larvæ situated in the thickness of the mucous membrane, which is thus profoundly altered.

As a preventive measure, it is advisable to drain pastures which are too humid or marshy, in order to hinder the development of the embryos. The authors also recommend dressing the land with lime and sulphate of iron.—(*Annales de Méd. Vét.*)

[No details of the structure or dimensions of the parasite are given in this note].

Researches upon Canine Tuberculosis.

Hendrik Schornagel, of Utrecht, has recently communicated his investigations upon this subject in an inaugural address at Bern. In the course of 568 post-mortem examinations of dogs carried out in the Institute of Pathological anatomy at the Utrecht Veterinary School, eleven cases of tuberculosis were found. This represents a proportion of 1·9 per cent.

The organs which were found affected, stated in the order of frequence, were the mesenteric lymphatic glands, lungs, bronchial lymphatic glands, pleura, liver, mediastinal lymphatic glands, neck, spleen, and (in one case each) the peritoneum, mesentery, pancreas, and kidneys. Generalised chronic tuberculosis was present in three cases, and generalised acute miliary tuberculosis in one case. In eight cases the tuberculosis caused either death or such severe illness that the dogs were destroyed as incurable.

The author finds that tuberculosis of the dog has no great similarity in its pathological anatomy with that of the other domestic mammals, except the cat. Histologically, also, the tuberculous nature

of the disease was difficult to recognise in most cases. Giant cells were not found in a single case, and calcification was only observed once. The diagnosis of tuberculosis was established by the discovery of tubercle bacilli and the positive results of the inoculation of guinea-pigs.

Of eight strains of tubercle bacilli which were cultivated, two belonged to the bovine type and four to the human type, while the other two represented transition forms. Consequently, a high percentage of the dogs were infected by human tubercle bacilli. A tuberculous dog therefore repreents a by no means negligeable danger to human health.—(*Berliner Tier. Woch.*)

W. R. C.

TENTH INTERNATIONAL VETERINARY CONGRESS, LONDON, Aug. 3—8, 1914.

I have received the following donations and payments to the Organising Fund of the Congress since you published my list dated December 27th, 1913, in *The Veterinary Record* of Jan. 3rd, 1914.

My attention has been drawn to the following errors in previous lists of donations, viz. :—

The Veterinary Record, Dec. 7th, 1912. Southern Counties V.M.S. £31 10s. promised, should read £10 10s. promised and £10 10s. paid, and Young, J., should read Young, W. J.

Nov. 29th, 1913, delete Packman, W., £5 5s., he is included in the present list and, Hodgman, J. A., should read £2 2s. paid.

Jan. 3rd, 1914, for Dunlop, D., read Dunlop, J.

I am still some £60 short of the minimum sum to be raised by the profession, and I trust that this will soon be made good. I will thank all those who have promised donations and have not yet forwarded them to kindly send them as soon as possible, and so save me the trouble of writing them personally.

Frank W. Garnett, Hon. Treas.

Dalegarth, Windermere.
April 7th.

Those names marked with an * denotes persons and societies other than veterinary.

Paid. £	s.	d.		Promised. £	s.	d.	Promised £	s.	d
3	3	0	Jolliffe, Capt. C. H. H.				3	3	0
1	1	0	Armfield, J. M.				1	1	0
	10	6	Cronyn, W. B.					10	6
3	3	0	Imrie, D.				3	3	0
1	1	0	Ripley, J. H.				1	1	0
			Falshaw, P. S. (Singapore)				5	0	0
1	1	0	Hill, S. E.				1	1	0
	10	0	Eady, L. F.					10	0
1	1	0	Walpole, H.				1	1	0
1	1	0	Pollock, J. W.				1	1	0
1	1	0	Lloyd, L. W. Wynn						
1	1	0	Sampson, S. E.						
5	0	0	Shave, Prof. E. S.						
2	2	0	Morphew, H.						
2	2	0	Westgate, H. G.						
2	0	0	Holroyd, H.						
1	1	0	* Bullock, F.						
2	2	0	Shaw, Wm. F.				2	2	0
1	1	0	Newsom, G.				1	1	0
2	2	0	Hollings, G. P.				2	2	0
2	2	0	{Saunders, R. G.} {Motton, S. J. }	Guarant. £2	2		2	2	0

Paid. £	s.	d.		Promised. £.	s.	d.
1	1	0	Hatch, J.	1	1	0
3	6	8	Jones, T. Eaton			
5	5	0	Smart, W. W.	5	5	0
			Conner, Jas.	1	1	0
	10	6	Baker, E. W.			
3	3	0	Share-Jones, Prof. J. T.	3	3	0
2	2	0	Andrews, W. H. (Transvaal)	2	2	0
2	2	0	Robertson, J. B.	2	2	0
1	1	0	Edie, H.	1	1	0
1	1	0	* Romney Marsh Sheep Breed. Ass.	1	1	0
10	0	0	* Clydesdale Horse Society	10	0	0
1	1	0	Young, S.	1	1	0
3	3	0	Dunlop, J. B.	3	3	0
10	10	0	Reeks, H. C.			
25	0	0	* Highland and Agric. Society	25	0	0
2	2	0	Weighton, A.	2	2	0
2	2	0	Humphrey, C. J.	2	2	0
1	1	0	Rees, J. F.			
1	1	0	Soulsby, J.	1	1	0
	10	6	Spurgeon, C. H.		10	6
2	2	0	Young, J. Stow	2	2	0
3	3	0	Moore, J. W. T.	3	3	0
1	1	0	Ingersoll, F. H.	1	1	0
3	0	0	Jones, H. L. (Beira)	3	0	0
3	3	0	Dawson, J.	3	3	0
2	2	0	Broome, J. D.	2	2	0
1	1	0	Wilson, A. C., Capt.	1	1	0
2	2	0	Edwards, E. P.	2	2	0
1	1	0	Matthews. G. T.	1	1	0
1	1	0	Powell, W. J.	1	1	0
2	2	0	Carter, F. P	2	2	0
25	0	0	Stephenson, C.			
3	3	0	Brown, J. (Invergordon			
1	1	0	Bailey, R. J.	1	1	0
2	2	0	Nye, S. H.	2	2	0
1	1	0	Budge, G. T. F.	1	1	0
1	1	0	Kerr, Finlay	1	1	0
2	2	0	Penhale, R. E. L.			
1	1	0	Knowles, R. H.	1	1	0
2	2	0	Bell, Jas. G.	2	2	0
3	3	0	Howe, Geo.			
1	1	0	Cleveland, J.			
5	0	0	* Middleton, Lord	5	0	0
1	1	0	McGhee, Thos.	1	1	0
1	1	0	Varney, J.	1	1	0
1	1	0	Taylor, F. B. O.	1	1	0
1	1	0	Aggio, C.	1	1	0
5	5	0	Gibbings, G. H. 2nd don.	5	5	0
1	1	0	Weston, W. P.	1	1	0
1	1	0	Blake, J. V.	1	1	0
2	0	0	Reilly, Lt.-Col. J.	2	0	0
1	0	0	Head, H. S.	1	0	0
1	1	0	Williams, R. D.	1	1	0
	10	6	Whicher, A.		10	6
2	0	0	Garden, G. (Nyasaland)	2	0	0
2	2	0	Beddard, E.			
2	2	0	Howard, C. W.	2	2	0
	10	6	Murison, R. E.		10	6
1	1	0	O'Dea, A. F.	1	1	0
3	3	0	Thompson, Hy. (Aspatria)	3	3	0
2	0	0	Peacey, E.			
1	1	0	Borthwick, J.	1	1	0
1	1	0	Walker, J. S. & Son	1	1	0
1	1	0	Branford, R. (Punjab)	1	1	0
5	5	0	Litt, W. E.			
1	1	0	Awde, Wm.	1	1	0
1	1	0	Towne, A. H.	1	1	0
1	1	0	Jelbart, G. H.	1	1	0
4	0	0	Anderson, Wm. (Keith)			
1	1	0	{Hoadley, C. C.} {Head, A. S. }	1	1	0
1	1	0	Hall, Ed.	1	1	0
2	0	0	Holmes, Maj. J. D. (India)	2	0	0

Paid.				Promised.	Promised.	
1	1	0	Lainé, E. J.	1	1	0
1	1	0	* Farmers' Club			
10	0	0	* Shire Horse Society	10	0	0
1	1	0	Conchie, J. W.	1	1	0
50	0	0	Sheather, C., & Sons			
1	1	0	Kirkpatrick, A. C., (Cape Town)	1	1	0
2	2	0	Schofield, W. G.	2	2	0
50	0	0	Sewell, A. J.			
1	1	0	Collihole, R. S., £1 1s. guarantee	1	1	0
15	15	0	Parker, T. M.			
	10	0	Jones, Rd.		10	0
2	2	0	Broad, Arth.	2	2	0
5	5	0	* National Pony Society			
1	1	0	Anderton, J. W.	1	1	0
3	3	0	Elphick, G., & Sons	3	3	0
5	0	0	* Linlithgow, Marquis of	5	0	0
1	1	0	Richardson, W. L.	1	1	0
1	11	6	Moody, J. F. B.			
5	0	0	Ascott, Wm.			
2	2	0	Fletcher, W. J.	2	2	0
3	3	0	Roberts, G. A. (Cairo)	3	3	0
1	1	0	O'Boyle, H. (Queensland)	1	1	0
1	1	0	Connell, J. A.	1	1	0
5	5	0	Jackson, J. R.	5	5	0
5	5	0	* Crewe, Earl of			
1	0	0	Cattell, J. G.	1	0	0
2	2	0	Duncan, A. C.	2	2	0
3	3	0	Cade, W. J.	3	3	0
	10	6	Mason, H. E. T.		10	6
1	1	0	Edwards, W. T.	1	1	0
5	0	0	Smith, Genl. F.			
	10	6	McConnell, H.		10	6
3	3	0	Wynne, J. H.			
1	1	0	Hide, H. H.	1	1	0
5	5	0	*Hackney Horse Society	5	5	0
3	3	0	Nelder, W. B.	3	3	0
1	1	0	Golledge, H. C. D.	1	1	0
26	5	0	* Royal Agricultural Society	26	5	0
5	5	0	Hunters Improvement „	5	5	0
			Bowlas, T.	1	1	0
21	0	0	* Shorthorn Society	21	0	0
5	5	0	* Stewart, Sir H. S.	5	5	0
1	1	0	Mayall, G.	1	1	0
10	0	0	Liverpool University V.S. (per A. Walker, Esq.)			
1	1	0	Panton, A.	1	1	0
1	0	0	Millar, Augt. (Cairo)	1	0	0
2	0	0	Rabagliati, D. S. (Egypt)	2	0	0
2	0	0	Hutchinson, F. (Natal)	2	0	0

New Zealand Vety. Surgeons (per H. A. Reid, Esq.):

1	1	0	Brodie, A. M.	1	1	0	
1	0	0	Blake, T. A.	1	0	0	
2	2	0	Collins, W. T.	2	2	0	
1	1	0	Crossley, F.	1	1	0	
1	1	0	Edgar, P. M.	1	1	0	
1	1	0	Howard, E. C.	1	1	0	
1	0	0	Lyons, J.	1	0	0	
	10	6	Primmer, J. H.		10	6	
1	1	0	Taylor, A.	1	1	0	
2	2	6	Reid, H. A.	2	2	6	
							12 0 0
2	2	0	Wilkinson, W. H.				2 2 0
1	1	0	Howie, A. M. (S. Africa)				1 1 0
1	1	3	Bell, P.				1 1 3
	10	6	Holland, J.				10 6
	10	0	"Anonymous"				10 0
1	1	0	Hines, A. J.				1 1 0
	10	0	Crowhurst, J. J.				10 0
	10	6	McBryde, J.				10 6
1	1	0	Cave, Prof. T. W.				1 1 0

Paid.				Promised.	Promised.	
3	3	0	Richardson, J. M.		3	3 0
	10	6	Beckett, A. J.		10	6
	10	6	Dykes, J. R.		10	6
10	0	0	Lawson, Alex.			
			Hamilton, D.		5	5 0

Central Vety. Society (per H. A. MacCormack, Esq.):

2	2	0	Philp, R. A.				
5	5	0	Howard, P. S.				
3	3	0	Almond, N.				
2	2	0	King, W. S.	2	2	0	
2	2	0	Gostling, A. E.	2	2	0	
10	10	0	Slocock, S. H.				
5	5	0	Willett, J.				
10	10	0	Hobday, F. T. G.				
5	5	0	Willis, Wm.				
2	2	0	Samson, F. G.				
5	5	0	Woodger, Jos.				
1	1	0	Smith, P. W. D.	1	1	0	
2	2	0	Davis, W. R.	2	2	0	
1	1	0	Stanley, F. W	1	1	0	
1	1	0	Lowe, G. C.	1	1	0	
5	0	0	Tailby, M.	5	0	0	
1	1	0	Eaglesham, R.	1	1	0	
			Martin, G. D.	1	1	0	
2	2	0	Whitlamsmith, H. H.	2	2	0	
5	5	0	McIntosh, J. W.				
5	5	0	Foreman, R. J.				
							18 13 0

Yorkshire Vety. Society (per J. Clarkson, Esq.):

5	5	0	Yorkshire Vety. Society				
6	0	0	Crawford, Wm.				
2	2	0	Ellison, A.				
2	2	0	Whitehead, Geo.				
4	4	0	Carter, G. W. / Holland, H. M.				
1	1	0	Deighton, P.				
			Mason, A. W.	1	1	0	
			Clarkson, J. (2nd don.)	5	0	0	
1	1	0	Abson, P.	1	1	0	
2	2	0	Tainsh, J. W.				
							7 2 0

Royal Counties V.S. (per G. P. Male, Esq.):

5	5	0	Male, G. P.				
3	3	0	Coleman, J. C.				
1	1	0	Broad, W. T.	1	1	0	
3	10	0	Simpson, P. J.				
							1 1 0

Lincolnshire V.S. (per T. Hicks, Esq.):

3	3	0	Rudkin, T. A.				
2	2	0	Hicks, Thos.				
3	3	0	Lennox, Alex.				
3	3	0	Lalor, A. D.				
3	9	0	Gooch, F. L.				
3	3	0	Bindloss, T. B.				
5	5	0	Lincolnshire V.S.	5	5	0	
10	10	0	Hartley, C., Sr. & Jr.	10	10	0	
3	3	0	Holmes, J. T.				
1	1	0	Masterman, S. G.	1	1	0	
							16 16 0

West of Scotland V.S. (per G. W. Weir, Esq.):

2	2	0	Anderson, R. G.	2	2	0	
2	2	0	Reynard, J. G.	2	2	0	
1	1	0	Macintyre, J. F.				
1	1	0	Douglas, Alex.				
1	1	0	Hamilton, T. B.				
1	1	0	Brown, D.				
							4 4 0

Paid.				Promised.			Promised.		
Lancashire V.S. (per J. W. Brittlebank, Esq.):									
10	0	0	Hopkin, T.	10	0	0			
			Smith, C. S.	2	0	0			
			Cockburn, W. L.	3	3	0			
			Holroyd, J.	1	1	0			
			Edwards, F. G.	2	2	0			
			Elam, C. W.	2	2	0			
3	3	0	Locke, G. H.						
2	2	0	Wolstenholme, J. B.	2	2	0			
2	2	0	Hughes & Son						
1	1	0	Noar, Wm.	1	1	0			
			Taylor, W. A.	5	5	0			
10	10	0	Packman, W.	10	10	0			
							39	6	0
Midland Counties V.S. (per H. J. Dawes, Esq.):									
2	2	0	Clifford, C. J.						
1	11	6	Dayus, C. E.						
1	1	0	Secker, B. L.	1	1	0			
5	5	0	Renfrew, A.	5	5	0			
2	2	0	Burchnall, J. J.						
5	5	0	Spencer, T. F.						
	10	6	Murray, R.						
3	3	0	Reynolds, H. S.	3	3	0			
							9	9	0
Eastern Counties V.S. (per S. Smith, Esq., Jun.):									
1	1	0	Little, W. L.						
1	1	0	Jack, D. S.						
1	1	0	Auger, T. E.						
1	1	0	McTurk, A.						
			Total				£410	4	3

CENTRAL VETERINARY SOCIETY

[National V.M.A. Southern Branch.]

The monthly general meeting was held at 10 Red Lion Square, W.C., on Thursday, April 2nd, Prof. G. H. Wooldridge, President, in the chair. The following Fellows signed the attendance book: Messrs. W. R. Davis, M. G. Byerley, J. F. Macdonald, H. D. Jones, J. B. Buxton, H. J. Parkin, G. H. Livesey, N. Almond, Capt. G. Rees-Mogg, S. H. Slocock, J. W. McIntosh, W. R. Clarke, R. Eaglesham, Prof. E. B. Reynolds, L. Auchterlonie, R. Bryden, J. Willett, E. L. Stroud, J. C. Coleman, F. G. Samson, W. S. King, W. Perryman, W. Willis, F. W. Willett, W. N. Thompson, G. Gordon, and Hugh A. MacCormack, hon. sec. Visitors: T. C. Toope and T. A. Huband.

On the proposition of Mr. McIntosh, seconded by Mr. Samson, the minutes of the last meeting were taken as read and confirmed.

Correspondence. The Secretary reported the receipt of a letter from Lieut.-Col. E. Taylor, A.V.C., regretting his inability to be present, and also announced the receipt of a circular letter from the conjoint veterinary associations (Ireland) on the subject of the direct representation of Ireland on the R.C.V.S., and asking for the support of the Society for Mr. Howard.

The President said it was the custom of the Society not to ask its Fellows to vote for any particular candidate but to leave the matter to the free choice of the Fellows, and therefore the letter should lie on the table. This procedure was agreed to.

Morbid Specimens.

Mr. J. Willett exhibited a specimen from the bowel of a dun pony that had been working in Regents Park, drawing the roller and mower and tip-cart. On Feb. 4th it was brought to him in a debilitated state suffering from obstinate constipation. He found the pulse very feeble, the mucous membrane sclerotic, and fæces in small pellets. The teeth were very ragged, and he came to the conclusion there was liver trouble. The teeth were attended to, and a purge was given, followed by stimulants; the pony began to pick up towards the end of February, and he ordered it for work again on the 28th. On March 26th the pony was down, reported unable to rise, but when seen by his assistant the animal was standing and showing symptoms of colic with no acute pain but general uneasiness. The pulse was feeble. The conjunctiva showed no inflammatory symptoms at all. Towards the evening the pain became more intense, and enemas were given without result. There was no straining, but opiates had very little effect in lessening the pain. Prognosis very unfavourable. In the morning the animal was shot, and a post-mortem was made by Mr. Jackson, who was acting as locum, and it revealed several very large patches of discolouration of the small bowel which, when opened, had enormous ulcers with green centres. The bowel was fairly full, and on cutting into it a large intussusception was found, the small bowel passing through the ileo-cæcal valve about 3ft. in length, on the end of which was a tumour-like enlargement about the size of an orange. It was only in the latter part of the time that the pony sat upon its haunches like a dog. The specimen had been shown to Professor Wooldridge at the College, and also to Sir John M'Fadyean, who said the condition was tuberculosis of the bowel. One would have thought that with so many ulcers there would have been diarrhœa, but during the whole month the evacuations were small pellets about the size of walnuts. He had a theory that the disease might have been caused by human infection, because the animal was always eating the grass in the Park, which was the promenade of patients from a number of nursing homes in the neighbourhood, and their sputum may have been on the grass. The pony was thin, but picked up markedly towards the end of the month of February.

The President said the tuberculous ulcers were of enormous size, some being three inches in diameter, and there were tuberculous masses in the intestinal wall. The tumour-like enlargement at the end rather suggested in appearance a glans penis of a horse; it was the intussusception of the ileum through the ileo-cæcal valve.

Mr. Livesey exhibited the penis of a large fox-terrier which for the last eighteen months had been suffering from intermittent hæmorrhage from the sheath. It occurred sometimes once in a week or two, and sometimes the dog would go as long as two months. When the attack occurred blood slowly dribbled from the mouth of the sheath, and sometimes increased to a flow. Latterly the hæmorrhages had increased in severity and in number, so that the dog sometimes had as many as five in twenty-four hours. The dog would stagger about and show all signs consequent upon loss of blood, but his power of recuperation was extraordinary. For some hours before the attack the dog would be uneasy and for hours together would not lie still. On the upper side of the penis he found a small round hole, which had all the appearance of being a ruptured vein. He inquired from the owner if there was any erection to account for engorgement and consequent hæmorrhage from rupture, but during the whole time he had never seemed to have had an erection, and the penis never seemed to be enlarged. The owner was anxious to keep the dog going on as he was, provided there was no danger to his life, but some months later he complained it was becoming very difficult to manage the dog in the house owing to the blood. At this period he distinctly felt lumps in the body of the penis itself close by the small hole where the hæmorrhage arose, and it seemed it him it might possibly be a malignant growth, because the inguinal glands were enlarged. Prof. Wooldridge had offered to examine the growth under the microscope,

Mr. McINTOSH exhibited part of the right innominate bone of a van mare destroyed as a result of an injury. Fractures of the innominate bone were not uncommon in London horses, but there were some peculiarities about the present case which he regarded as unusual. Notwithstanding the extensive and complicated nature of the fracture, the lameness at the onset was very slight. He was unable to diagnose fracture for a considerable time. The animal was in foal, and two days after the lameness made its appearance, she picked her foal, and the following day was exceedingly lame, and it was only through that he was able to discover a fracture. Whether efforts to pass the fœtus had anything to do with displacing the bones he could not say; he thought it probable. The fracture extended through the acetabulum in three directions. There was no history of a fall or any injury likely to bring about such a condition. Was it possible that pregnancy has anything to do with predisposing the bones to fracture?

The PRESIDENT asked in what position the affected limb was held.

Mr. McINTOSH said the limb appeared shortened, and was suspended with the toe on the ground. The mare was six years old.

The PRESIDENT did not think the pregnancy had anything to do with it. One symptom he had seen in horses where there had been a fracture involving the acetabulum was marked adduction, the affected limb being held across the front of the sound limb, sometimes resting on the ground with the tip of the toe on the opposite side of the middle line. This was constant, and very marked indeed in the dog, in which animal the fracture was most frequently seen.

Mr. McINTOSH said he noticed no abduction or adduction in the present case.

The PRESIDENT said the specimen of the penis of the dog was of considerable interest, and he would try and determine what was the cause of the hæmorrhage. He did not think it would turn out to be a malignant growth. The enlarged glands might have been due to an infection of the wound. It was more likely to be due to an injury to the os penis or corpus cavernosum. When he was first spoken to about the case he suggested that a remedy might be found in preventing erection by castration *plus* large doses of bromide, until the wound healed. The suggestion, however, was not put to the test.

Mr. J. C. COLEMAN exhibited specimens of parasites found in the horse's fæces, and asked whether they could be identified. Were they the S. Tetracanthus? For the past four years he had had a client who bred hunters and cart-horses, and at the age of three years one of them became very emaciated, with staring coat, and very weak. Although each year for the past four or five years parasitic infection of the bowels was suspected, none have been observed until this year. At present he was treating the cases with ferri sulph. and gentian; occasionally there was diarrhœa. It always attacked horses at three years old, and the present case was the fourth he had had in five years. They became worse and worse, and were ultimately sold for a small price. Last year a hunter was sold for £15 which could have been sold for £100 at two years old.

Capt. REES-MOGG showed the third cervical vertebra of a horse which fell but got up and walked home a distance of two miles. The horse lived for a week, and was able to eat all right if the food was lifted to him, but could not lower his head. A week later he fell down with symptoms of fracture and died within twelve or fourteen hours, and then a bad fracture of the vertebra was discovered.

The PRESIDENT thought the case would have done admirably well with Mr. Price's neck splint exhibited some time ago to the Society.

Prof. ALMOND said he had a case of recurrent hæmorrhage in a bull-dog, but could not pursue it as the owner moved out of the neighbourhood. The hæmorrhages existed for a considerable time, and the animal came into the infirmary on two different occasions. He did not appear to suffer much pain or much trouble.

Mr. LIVESEY said he could bear out what the President had said as to the carriage of a lame leg in a fracture of the acetabulum in the dog; the leg was held fairly straight, the toe extended, and the leg adducted, and carried in front of the sound foot.

Mr. MACDONALD said that in the Dick Veterinary College there was a specimen of innominate bone similar to that shown. The case recovered and the animal worked for several years.

Mr. DAVIES suggested that Mr. Coleman should try plenty of milk for his case. He had found milk and cod-liver oil very good in such cases on farms in Cambridgeshire, where the disease is extremely rife. The ordinary anthelmintics, including Thymol he had found without effect.

Prof. ALMOND said there was no doubt about the identity of the parasite; it was a sclerostoma tetracanthum. He had recently had a case in a four-year-old mare in which the parasite was first observed about July, and she continued to pass parasites for about twelve months. They were not all of the red colour shown by Mr. Coleman, the greater number being quite white.

Mr. COLEMAN said everyone of the parasites in his case was red.

Prof. ALMOND said that if put into water the red colour generally disappeared. While he was away on a visit the animal was treated by another practitioner with carbolic acid, half an ounce in a pint of linseed oil, but that set up a great deal of pain. On his return he put the mare on carbonate of iron, and encouraged her to eat. She was kept warm, and given about two drams of carbonate of iron every night and morning with her food, and was now quite well.

Mr. HUBAND said Mr. MacIntosh's specimen was an exceedingly interesting one as showing the amount of fracture which might occur without seriously affecting the animal before displacement. He had seen many cases of fracture of different portions of the innominate bone with evidence of recovery. With regard to the fracture of the cervical vertebra, it reminded him of a horse which ran away and came in contact with a stone pillar. He was called to the horse as it lay in the road, but could not make out much the matter except that it was stunned. He sent along a harmless draught by the yardman and raising the head to give the draught, displacement occurred, and the animal gave a few kicks and died. The crowd naturally thought the draught had killed the horse and began to laugh, but the yardman turned round and said: "You need not laugh, that is just what Mr. Huband said, if it does not cure him it will kill him."

Mr. PERRYMAN said in all cases of fracture there was constant hæmorrhage between the fracture, and a gradual widening of the broken portions of the bone by the blood clot. That was exemplified very often in pelvic injury. I many cases it was impossible in the first stages to diagnose definitely where the fracture was, and he thought the same thing applied to the cervical vertebræ. He had known cases of pelvic injury last a few weeks without any displacement until a sudden wrench separated the bones. He had a case last year in which the bone was broken from the symphysis into the acetabulum, and the animal held the leg forward and pivoted round on the other leg. In milder cases, where the acetabulum was not much involved, it was possible to have recovery.

The PRESIDENT said the parasites shown by Mr. Coleman appeared to be sclerostoma tetracanthum and the symptoms described were quite commonly met with, causing in most instances suspicion of tuberculosis. Treatment was not always successful even under the best circumstances. Horses would recover without any treatment, while others would gradually get worse and die under any method of treatment. The cause of death appeared to be due to a secretion by the parasites causing hæmolysis, and death was due to exhaustion. If a horse was not already up from pasture he should be got up and given a supply of concentrated highly nutritious foods, rather on the dry side than laxative, and after he had begun to eat his food he should be given such vermicides as Arsenic, Antim., Pot. tart., and Sulphate of iron. Thymol was strongly recommended by some practitioners. He had been told by a country practitioner that by some mischance a case of his was given half a pint of petroleum oil, such as was used for lighting, and the horse began to improve materially. On a number of subsequent occasions he had repeated the line of treatment and had had better success from that than from any other. The chief difficulty in the disease was the fact that the worms were in the large intestines and frequently buried in the wall, and therefore almost beyond the reach of medicines before they were excessively diluted. A half-pint of petroleum given after fasting seemed rather a drastic method, but it should be remembered that the fluid would run straight away through into the cæcum, and would affect the worms more directly than any other line of treatment.

Mr. HUBAND said he had known cases of parasitic infection where the regular employment of rock salt had had a marvellously good effect in improving the conditions.

Mr. COLEMAN said the owner of the horses was a great believer in rock salt, and kept it in all the fields. The horse had shown no decline in condition.

Mr. TOOPE said many years ago he had a horse constantly suffering from flatulent colic, and on one occasion it was so enormously distended that he punctured the intestines with a small trochar and injected a considerable quantity of antiseptic fluid, terebene. To his astonishment the following morning the excreta was practically full of worms, and he came to the conclusion that terebene was the most effective vermifuge he had ever seen given in that way. They were all round worms, strongyles, of various descriptions. On other occasions he adopted the same line of treatment, but not with the same success.

Mr. SLOCOCK believed it was acknowledged that the tetracanthus existed for many years in a brood mare, and once she had it she had it for a lifetime.

Mr. COLEMAN said the mares were all different; one was a hunter, and three were colts. One of them was bought and not bred on the place.

The PRESIDENT thought there was no doubt the infection came from the land.

Election of Fellow.—Mr. JOHN BROWNLESS, M.R.C.V.S., of Kensington, was unanimously elected a Fellow.

Royal Sanitary Institute Congress. On the motion of Mr. J. Willett, seconded by Mr. E. Lionel Stroud, the President was nominated as delegate to the R.S.I. Congress at Blackpool, from July 6th to 11th.

Election to Council of National Veterinary Medical Association.—The PRESIDENT said the Society was entitled to six representatives on the Council of the National V.M.A.

Prof. ALMOND proposed that the present representatives should be re-elected:—Messrs. McIntosh, Foreman, Slocock, Davis, J. Willett, and Prof. Macqueen.

Mr. COLEMAN seconded the motion, which was carried unanimously.

ON THE INFLUENCE OF AN INJECTION OF MALLEIN ON THE SERUM DIAGNOSIS OF GLANDERS.

By J. BASIL BUXTON, F.R.C.V.S., D.V.H.

(This appeared in our issue of April 11th.)

Before reading his paper Mr. Buxton explained that when any foreign organisms were introduced into an animal various antibodies were produced, some of great importance and others not so important. Agglutinating antibodies were perhaps some of the most important and had the peculiar property of linking up with some substance or substances in the bacterial cells and so causing clumping of those organisms.

The complement binding antibodies were probably of the nature of bacteriolysins, at any rate they possessed a similar composition. Bacteriolysins were composed of two essential parts, an amboceptor and complement.

The amboceptor, as its name implied, was a link, and possessed the power of joining up on one hand with the antigen, in this case the specific bacterial cells themselves, and on the other with the complement, and while the complement had little or no affinity for the specific antigen it had a very marked affinity for the amboceptor. Similarly while the amboceptor was able to link up with the antigen bacteriolysis did not occur except in the presence of complement. When such a union took place, namely complement, amboceptor, and antigen, bacteriolysis occurred. While the amboceptor was a thermostable body, *i.e.* resisted heating for 1 hour at 55° C., the complement was destroyed under similar conditions, and in the complement fixation test advantage was taken of this fact. The natural complement which existed in an unknown amount in the specific serum to be treated was destroyed, and replaced by a known amount of complement of known strength. The amount of amboceptor contained in the specific immune serum which was required to complete the system, *i.e.* link up with the known amount of complement and antigen, was spoken of as the complement binding titre of that serum.

DISCUSSION.

Prof. ALMOND, while thanking Mr. Buxton for his paper, confessed it was beyond his ability to criticise it. He had some knowledge from current literature of the various bodies produced in the animal economy, and there was no doubt that they were of the very greatest possible interest to those who were able to follow them and utilise them, but they appeared to be beyond the ability of the ordinary practitioner. It seemed to require a well appointed laboratory to be able to test the influence of the method, and evidently it was not intended for employment by ordinary practitioners; it did, however, show the direction in which medical research was going, and as such was of extreme interest.

Mr. PERRYMAN asked whether the injection of mallein had any effect on the toxins of other diseases, such as the pneumococcus and streptococcus—any retarding action in the development of them. Would an injection of mallein into an animal suffering from strangles or pneumonia reduce the temperature? On more than one occasion he had injected an animal having a high temperature with a dose of mallein, and he found the temperature came down in a remarkable manner. In testing a stud for glanders it was remarkable to see how some aged and debilitated animals would begin to pick up after an injection. This was the experience of many veterinary surgeons he believed. Also he wished to know whether the injection of mallein was curative in the case of an animal already affected, and preventive when injected into an animal not affected.

Mr. DAVIS said he had gathered from *The Veterinary Record* that there was an opinion abroad that not much reliability was to be placed on the use of mallein as a diagnostic agent in the detection of glanders. He had used a good many thousand doses himself, and had come to the conclusion years ago that a great deal depended on the quality of the mallein. During the South African war every animal, horses and mules, had to be tested, and with some of the American malleins the usual reaction did not take place, but there was the formation of a doughy swelling, often developing later into a necrotic mass. He was quite satisfied that proper mallein was as absolutely certain in diagnosing glanders as tuberculin was in diagnosing tuberculosis. With regard to mallein reducing temperature, at one time he had great faith in a certain remedy for the reduction of temperature, antifebrin. He had a contract for attending tramway horses, and in passing the stables one night he was asked by the Manager to look at a horse, and found it had a temperature of near 107. The Manager, however, did not wish him to worry about it that night, and when he went in the morning he found the temperature reduced to 101°. If he had given the animal antifebrin on the previous night he should have been under the impression that it had brought down the temperature. He suggested to Mr. Perryman that if he had given an injection of *aqua pura* he might have found the temperature down in the morning just the same.

Mr. PERRYMAN said he referred to cases of persistent high temperature, when an animal had had a temperature for a fortnight. He had at present a case where the temperature had been up ten days, and he could not get it down nor find complications to account for it. He should probably give that animal a dose.

The PRESIDENT said Mr. Perryman might let the Society know the result at the next meeting.

Prof. ALMOND asked Mr. Davis at what period the necrotic masses occurred as the result of an injection of so-called mallein.

Mr. DAVIS said several days after inoculation. There was a swelling on the next day, but it became necrotic after several days.

Prof. ALMOND asked whether the swelling showed the ordinary characteristics that followed the injection of mallein in an unaffected horse.

Mr. DAVIS said no. With the mallein obtained from the Royal College afterwards no such cases occurred.

Mr. MCINTOSH said he had used many thousand doses of mallein, and he agreed with Mr. Perryman that it was capable of reducing a persistent high temperature. Another remarkable fact was that a horse which had been previously unthrifty, when dosed with mallein suddenly improved in condition and began to thrive. Apparently it altered the condition of the blood, or in some other way helped the animal to build itself up.

Mr. J. WILLETT also agreed that mallein reduced temperature. Some fifteen years ago he had a stud of 80 brewery horses which were submitted to the mallein test, and 22 of them reacted. A Professor from the College suggested that mallein was a curative, and the animals were put into a stable by themselves and had to work together, and he had to test them regularly each month over a considerable period. There were several unthrifty horses amongst them, and after several doses they began to improve in condition, and out of 18, only five were killed, and the others put back into stock again.

The PRESIDENT said there were certain practical points in connection with Mr. Buxton's paper which did not appear to have come home to most of the members. They were mainly bound up with the fact that although practitioners liked to consider mallein as near perfection as possible they could not blind themselves to the fact that it was not perfection and not always applicable; it was a very useful agent, and the number of fallacies met with in connection with its use were fortunately comparatively few. But the limitations of the substance had been recognised on the Continent to a greater extent than in this country, so much so that in some foreign countries, Hungary in particular, diagnosis was limited to the agglutination test, which had been found to be fraught with fewer fallacies than the mallein test, and the use of mallein as a diagnostic agent had been made illegal because it interferes with the agglutination test.

So far as he was aware there had not been sufficient attention drawn to the comparative advantages of the complement fixation test and the agglutination test previously, and Mr. Buxton's work might assist materially in that direction, because if Mr. Buxton's work was supported by other investigators the necessity for rendering the use of mallein illegal would no longer operate, for instead of putting the horse through the agglutination test, the complement test could be applied in cases of doubtful results from the mallein test. The mallein test was the easiest to apply, and the most satisfactory to the practitioner, as he could carry it through without having to send it to a laboratory. An interesting feature mentioned in the paper was that the blood again returned to normal in from four to five weeks after an injection of mallein, so that the agglutination test could be applied after that time. That, however, was a long time in connection with an outbreak of glanders. He would like to know if Mr. Buxton's horses were all being used for the production of various immune sera, for although it was regarded that the antibodies were absolutely specific, yet he thought a good deal remained to be done in that connection, and that had been generally pretty clearly shown in Mr. Buxton's own results.

Was it definitely proved beyond any dispute that the process of immunising animals against other organisms did not interfere in any way with the production of antibodies when mallein was injected? In Mr. Buxton's cases the production of antibodies causing agglutination was fairly constant, yet there were two specific cases where antibodies were produced, and the complement fixation test was interfered with. One, he believed, was the gonococcus, and the other the meningococcus. These were two cases where horses being immunised against two sets of organisms had the reaction interfered with, and he should like to know whether it was beyond all doubt that such a thing might not occur in other instances. He did not think many practitioners used mallein as a febrifuge, and he did not think they intended to. In some cases which he had suspected of being affected with glanders and had submitted to the test, although he had had no reaction either in temperature or local swelling, the horses that had been previously off their feed and unthrifty had suddenly taken to eating well and had begun to thrive, He remembered calling Mr. Hunting's attention to similar cases and asking his opinion, but all he could get from him was a shake of the head and, "I should regard such cases as suspicious and test again." That was a very sound dictum. He hoped Mr. Buxton would proceed with his work and bring it to still further fruition.

REPLY.

Mr. BUXTON, in reply, said he had hoped that some of the members would have come across cases suspected of being glanders in which they had obtained no reaction to mallein, and where they possibly had had the agglutination test carried out subsequent to the mallein test. He did not know that mallein could be used as a febrifuge, but apparently it had produced some very startling results. With regard to Prof. Wooldridge's remarks, no one had ever suggested that an animal possessing antibodies produced by other organisms

would not give *to some extent* reactions to the bacillus mallei, and that was borne out in the case of two instances he had quoted, the horse that was being injected with dead meningococcus and the horse injected with dead gonococcus. In some cases of young horses which had recently recovered from an infection with Streptococcus equi, he frequently found they got a typical reaction to mallein if tested within a week or two of their recovery. What was more disconcerting, such horses would give a comparatively high agglutinating titre, so that one was not able to say whether the horse was free from glanders or not. Fortunately, however, the complement fixation test furnished a much more definite knowledge. Some cases were on record in which the body cells had been sensitised by streptococcus equi, and the result of the mallein test had been a local swelling, sometimes accompanied by a rise of temperature, but the swelling had not followed the course generally observed in a glandered animal. With regard to the horses being immunised, he would point out these were used more or less as controls. Of the 29 horses he had recorded every horse was normal. With reference to the question of the curative effects of mallein and the prophylactic effects, one would have every reason to suppose that were mallein given in sufficiently large doses it might possibly exert some curative or prophylactic effect. He did not mean to suggest that 5 or even 10 c.c. was going to have a prophylactic effect, as the doses would have to be much larger and given over a fairly long period.

On the proposition of Mr. Samson, seconded by Mr. E. Lionel Stroud, a hearty vote of thanks was accorded to the gentlemen who had brought forward post-mortem specimens.

A hearty vote of thanks was also accorded to Mr. Buxton, on the motion of Mr. J. Willett, seconded by Mr. Davis.

The meeting then adjourned.

HUGH A. MACCORMACK, Hon. Sec.

DISEASES OF ANIMALS ACTS 1894 TO 1911, SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange.		Sheep Scab.	Swine Fever.	
	Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
IRELAND. Week ended April 11	...	...	2	10	...	...	Outbreaks 3		9	10	21
Corresponding Week in 1913 ...	...	...	...	...	...	...	...		10	...	13
Corresponding Week in 1912 ...	...	...	...	...	...	...	...		8	10	31
Corresponding Week in 1911 ...	...	...	...	...	...	1	...		4	3	39
Total for 15 weeks, 1914 ...	1	2	65	601	...	...	37		305	84	353
Corresponding period in 1913 ...	...	...	...	...	...	...	75		230	40	245
Corresponding period in 1912 ...	1	1	...	...	...	...	27		221	74	575
Corresponding period in 1911 ...	3	3	...	...	1	2	36		213	41	723

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, April 14, 1914

NOTE.—The figures for the Current Year are approximate only.

* As Diseased or Exposed to Infection

SOUTHERN COUNTIES VETERINARY SOCIETY.

[NATIONAL V.M.A. SOUTHERN BRANCH.]

The thirty-third annual general meeting was held at the Royal College of Veterinary Surgeons, Red Lion Square, London, on Thursday, the 26th March, when the retiring President, Mr. G. H. Livesey, of Hove, took the chair, and the others who signed the attendance book included Professor G. H. Wooldridge, London; and Messrs. J. T. Angwin, Arundel; A. H. Archer, Southsea; Walter Burt, junr., Brighton; Gerald W. Bloxsome, Hove; E. Whitley Baker, Wimborne; F. G. Samson, Mitcham; and P. J. Simpson, Maidenhead; together with Mr. J. Basil Buxton, and Mr. H. A. MacCormack, London.

Apologies and expressions of regret at inability to attend were announced from Messrs. P. Carter, W. Coveney, E. R. Harding, H. Leeney, J. B. Martin, J. C. Mumby, A. H. Lockwood, C. Pack, C. H. Spurgeon, H. Smith, R. A. Thrale, J. Alex. Todd, D. Wyllie, and F. T. Walder.

On the proposition of Mr. P. J. Simpson, seconded by Mr. Angwin, the minutes of the last meeting as published in *The Veterinary Record* were taken as read and confirmed, and on the motion of Mr. Walter Burt, seconded by Mr. Bloxsome, the rules of the Society were also taken as read.

The HON. SEC. (Mr. A. H. Archer) submitted a communication from Mr. J. H. Carter, the President of the Royal College, enclosing a form of petition to the Treasury for a civil pension for the children of the late Mr. William Hunting.

The PRESIDENT, after the text of this petition had been read to the members, remarked that he would move from the chair that it be signed by himself on behalf of the Society. Prof. Wooldridge seconded, and the meeting agreed.

Mr. E. WHITLEY BAKER remarked that while they were on this subject he should like to move as Treasurer that they should also vote the sum of £5 5s. from their funds to the Hunting Memorial Fund. When they remembered what the late Mr. Hunting did for the profession, and for their own Society in particular, he thought it would be a graceful and fitting act for them to make some little grant to that Fund.

Mr. BURT: Have you any idea what form this memorial is likely to take.

Mr. BAKER replied that he had been given to understand that the money, or at all events the greater part of it, would be invested on behalf of the family.

Mr. ANGWIN seconded, and the proposition to vote the five guineas was unanimously agreed to.

Prof. WOOLDRIDGE, replying to a question by Mr. Samson, explained that no definite steps could be taken until it was ascertained approximately how much money would be collected, but there was no intention of devoting the whole of the money to a stone memorial,

Mr. BLOXSOME asked when the fund was likely to be closed.

Prof. WOOLDRIDGE replied that it would certainly not be closed until they saw whether this petition for a pension was granted. The allocation of the fund would also depend very largely on whether they succeeded in getting a pension or not, because if the pension was obtained the capital, or the bulk of it, might be invested for the benefit of the family and then to revert to the Royal College of Veterinary Surgeons. Nothing definite had, however, been decided yet.

Mr. BLOXSOME remarked that personally he had a great objection to subscribing to permanent memorials that were going to take the form of a piece of stone, and he believed many other members of their profession had the same objection, but if they knew that their money was going to serve some useful purpose he believed there were many who would only be too pleased to snbscribe.

The PRESIDENT remarked that he personally had refrained from subscribing until he knew what form the memorial was to take, because if it was going to take the form of a stone, or some small scholarship, he confessed he should not subscribe very heartily, much as he esteemed the late Mr. Hunting, but if the money was going to be spent for the welfare of the family he would gladly give, and he was sure many others would as well.

Mr. SIMPSON asked if they could not embody this opinion in their resolution.

Mr. BLOXSOME: I am afraid it would be rather difficult to do that, but in sending the money we could express the hope that it will be utilised for the benefit of the family.

Mr. E. WHITLEY BAKER remarked that he was quite at one with the suggestion. Personally he was as much opposed as any of them to wasting money in eulogising the dead in such a form as the erection of some monument, but he certainly felt that they ought in consideration of what the late Mr. Hunting did for their Society, to vote something, and if they authorised him to do so he would forward the cheque with a stipulation that it should not be put to any other use than for the benefit of the family.

The PRESIDENT: I am afraid, gentlemen, we have already voted the money, and if you want to make any condition I must ask for another resolution.

Mr. SIMPSON: I will move that in sending the cheque the Treasurer be instructed to write saying that it is the wish of our Society that the money shall be used preferably for the benefit of the family and not for a permanent memorial. Mr. Angwin seconded, and it was unanimously agreed to.

The HON. SEC. mentioned that he had received another letter from from Mr. Garnett asking for further contributions towards the International Veterinary Congress Fund.

The PRESIDENT: You will probably remember that our Treasurer was authorised to send them a first contribution of ten guineas, I believe, and that has been done.

Prof. WOOLDRIDGE: I take it that this letter refers more to private contributions.

The PRESIDENT: Very likely, but I thought you ought to know what we have done as a Society.

Mr. E. WHITLEY BAKER thought he ought to mention the fact that he had had an application for a further donation from the Society, and on referring to the minutes he found that when they voted the ten guineas the remark was made that if in the future they were able, they might send them a further donation. He should therefore like the feeling of that meeting as to what they wished him to do, but perhaps they would like first to hear his financial statement. [Agreed].

The next business was to consider the advisability of appointing a delegate to the annual Congress of the Royal Sanitary Institute at Blackpool this summer.

Mr. ANGWIN in view of the other demands which they appeared to have on their funds thought they could spend their money to much better advantage in other ways, and he therefore proposed that they do not appoint a delegate. Mr. W. Burt seconded.

Prof. WOOLDRIDGE remarked that there was a lot to be said from Mr. Angwin's point of view, no doubt, but there was also a good deal to be said on the other side. It was said that they could get the reports even if they did not send delegates, but if every Society adopted that course there would be no reports to receive. Seeing that there was likely to be a considerable demand on the funds of the Society, however, he would suggest that this matter also stand over until they had the Treasurer's report.

Mr. SIMPSON proposed that this be done, and this was seconded by Mr. Samson, and carried.

SECRETARY'S REPORT.

During the past year, in addition to the annual meeting last March, three meetings have been held, at Portsmouth, Brighton and London. The attendances at these meetings has been fourteen, nine, thirteen, and eleven respectively. With the exception of the last meeting, which was held in Cattle Show week in London, these numbers are about up to the average. At the latter meeting, which was followed by the customary dinner, exclusive of the veterinary inspectors who were specially invited to attend in order to form an Inspectors Branch of the Society, only seven members attended the business meeting, and six the dinner. The Society's tooth instruments have been much appreciated, as shown by their requisition on several occasions, and they are now in my possession at Southsea. There are now about seventy-eight names appearing on our list as members, but I am bound to say that some of these should, in my opinion, be no longer regarded as members. Five new members have been elected during the year, but on the other hand several have fallen out or resigned. Mr. Todd, our late hon. secretary, formally resigned on September 25th, at which time I took over the duties of hon. sec. During the past year the Society has suffered a great loss by the death of two of our most esteemed members. Needless to say I refer to the late Mr. R. Roberts and the late Mr. W. Hunting. An important feature of the past year's proceedings has been the efforts made to establish an Inspectors branch of this Society, and from which some good financially should arise, especially in connection with the fees for the examination and inspection of stock, and attendances at markets, etc.

On the proposition of Prof. Wooldridge, seconded by Mr. Angwin, the report was adopted.

TREASURER'S STATEMENT.

Mr. E. WHITLEY BAKER, in submitting his statement, remarked that their income had been £29 3s. 6d., and their expenditure £25 11s. 9½d., leaving them with an increased balance of £21 17s. 7d. He wanted to point out to them, however, that their expenditure was now exceeding their income. During the past year they had received £29, but in the previous year they only had £13 come in. Since he got out his balance-sheet he had received a further two guineas, but they had that day voted five guineas towards the Hunting Memorial Fund, and he had outstanding liabilities amounting to about

£6, the latter including £3 for their subscription to the National. I mention these facts to show you that it will be necessary for us to husband our resources very carefully in future.

Mr. ANGWIN proposed that the balance-sheet, as presented, be passed, and this was seconded by Mr. W. Burt, and agreed to.

Mr. SIMPSON asked if the accounts could be printed and sent out with the agenda another year.

Mr. BAKER replied that he would bear that suggestion in mind.

The PRESIDENT next asked for the views of the members as to making a further donation to the International Veterinary Congress Fund, adding that at the present time it was a question whether their finances warranted them in sending anything more.

Mr. BLOXSOME proposed that they make no further contribution as a Society, and this was agreed to, the President pointing out that there was nothing to prevent members subscribing privately if they choose.

ROYAL SANITARY INSTITUTE CONGRESS.

The question of sending a delegate to the Sanitary Institute Congress was next dealt with.

Mr. ANGWIN proposed that they subscribe a guinea as usual, but that unless there was some member who would be able to attend at his own expense they do not go to the expense of sending any delegate.

Prof. WOOLDRIDGE seconded this, and the same was carried.

Mr. SIMPSON hoped some one would come forward and attend the Congress, as he happened to know that these meetings did afford veterinary surgeons a splendid opportunity to make their influence felt for the benefit of the profession with a certain class of people who were in some cases rather opposed to them. At the last Congress at Exeter the best attended meetings and the best discussions took place in connection with the Veterinary Section, and although it might not come back to them individually they were doing the profession, and indirectly themselves, a great deal of good by attending such gatherings as these.

Mr. ARCHER endorsed all that Mr. Simpson had said as to the value of having delegates at these Congresses.

Prof. WOOLDRIDGE also expressed the hope that they would be able to persuade some one to attend and represent the Society.

At a subsequent stage of the proceedings the President incidentally raised the question of the amount of the allowance that had been claimed by Mr. Archer, their delegate, last year, and

Mr. ARCHER explained that although it was quite true he would have attended the Congress at Exeter in any case, as he was reading a paper there, he accepted the position of delegate on the understanding that it was on the same terms as the year before, when four guineas were kindly voted towards his expenses, and he believed he made the remark that he would be pleased to represent them "on the same conditions as last year." He would also be pleased to attend the coming conference at Blackpool as delegate for the Society if they liked, and in that case he would leave it to the Society as to whether they paid him anything or not. These conditions were agreed to.

The PRESIDENT brought forward the matter of the Reception Fund for the International Veterinary Congress. They had voted ten guineas to this Fund, and he understood when he took the chair twelve months ago that the President and Secretary of each Society had been appointed members of the general Organising Committee of the Congress. He could only say, however, that since he had been in the chair he had not received a single notice from the Secretary of any meeting, but on the other hand he had received three begging letters asking him for a subscription. It did not seem to him that this was treating the Society with very much courtesy, and seeing that they had gone to the extent of subscribing ten guineas to the funds he thought the least they could have had in return was some little voice on the Committee. He did not know whether Mr. Archer, as Secretary, had received invitations to attend any meetings. To him, personally, it did not matter, but as President of the Society he thought the least they could have done was to have sent a notice.

Then, again, with regard to the Congress itself, it seemed to him that they were hardly treating the profession with the courtesy it deserved, in that although they had repeatedly asked for subscriptions they had not as yet told them what was going to be done. From what he had heard there seemed to be an opinion in many quarters that this Congress was being run by a certain number of people who were interested in such things, rather than for the benefit of the profession. It was a pity such an impression should have got abroad, and he thought it was due to the fact that they had not taken the Societies sufficiently into their confidence.

Prof. WOOLDRIDGE asked whether the fact that Mr. Livesey was elected their President had been officially notified to the Secretary.

The PRESIDENT: I don't know about that, but I know the changes were notified in *The Record* at the time, and that the necessary corrections have since been made in the list of the Societies and their officers which are published in the professional papers every month.

Mr. ARCHER: I can only say that I have received one invitation to any meeting, and that was forwarded on to me by Mr. Todd, and reached me too late for me to attend if I had wanted to. It was also a personal invitation to myself as Secretary.

Prof. WOOLDRIDGE: That rather seems to suggest that they have not been notified of the change in our officers.

ELECTION OF OFFICERS.

Mr. ANGWIN desired to propose the re-election of their present President, Mr. Livesey. (Hear, hear.) He had had a very broken year of office so far, owing to the change of their secretaries, and he was sure he would do still better during the coming year than he had done hitherto, and that it would be the wish of them all that he would consent to take on the office for another year. (Hear, hear.)

Mr. W. BURT seconded, and the proposition was at once put and carried by acclamation.

The PRESIDENT, in acknowledging the compliment, thanked them very much indeed for the honour they had again conferred upon him. He had no idea they were going to ask him to stand for a second year, but he should be very glad to take it on if he could in any way help on the Society. He hoped they would have a more successful and prosperous year than they had had last, and if he could do anything to that end he should be only too pleased. He thought they would be able to get some good papers, because that was what they wanted—short papers and demonstrations that would interest everybody. He could only repeat that he would do all he could to help forward the interests of the Society, and that he again thanked them for electing him once more to the chair. (Applause.)

Vice-Presidents. On the proposition of the President, seconded by Prof. Wooldridge, Mr. F. G. SAMSON was elected a Vice-president in the place of the late Mr. William Hunting, and the other three Vice-presidents, Mr. C. ROBERTS, Mr. S. H. SLOCOCK, and Mr. ANGWIN, were re-appointed on the proposition of Mr. Caudwell, seconded by Prof. Wooldridge.

Committee. Messrs. J. B. DIER, C. PACK, R. WALL, and J. T. ANGWIN were also chosen as the Executive

Committee for the coming year on the motion of Mr. Burt, seconded by Mr. Simpson.

Hon. Treas.: Hon. Sec. Mr. Angwin next proposed the re-election of Mr. E. WHITLEY BAKER as hon. treasurer, and Mr. A. H. ARCHER, as hon. secretary, and this was seconded by Mr. Simpson, and also carried unanimously.

Nomination. Mr. H. A. MCCORMACK was nominated for membership by the President, seconded by Mr. Angwin.

Next Meeting. It was also decided on the proposition of Mr. Angwin, seconded by Mr. Samson, that the next meeting be held at Worthing on the last Wednesday in June.

SOME REMARKS CONCERNING THE ETIOLOGY OF CAT INFLUENZA, WITH MICROSCOPICAL DEMONSTRATIONS.

By J. BASIL BUXTON, Wellcome Physiological Research Laboratories, London.

At a recent meeting of veterinary surgeons your President was kind enough to ask me to say a few words concerning the etiology of cat influenza. At that time I did not contemplate publishing anything concerning my work in that direction, but since that meeting circumstances arose which suggested that an early publication in the form of a preliminary report was advisable. The remarks which I made have probably been seen by most of you in *The Veterinary Record*, and while I do not feel at present in a position to add to them to any considerable extent, a brief *résumé* at this junction may not be out of place. There seems to be a good deal of conflicting opinion in so far as my clinical observations were concerned, for while I have been the grateful recipient of a number of letters from practitioners whose daily work brings them in contact with an ever increasing number of cases resembling the disease under discussion, and who agree with the clinical diagnosis *in toto*, several eminent clinicians apparently do not recognise such a complaint at cat influenza. That there should be this difference of opinion is of advantage from the point of view of this meeting, since it should tend to produce a lively discussion on the subject which is invaluable both to you and to me. It is, however, after all quite immaterial what name one may choose to give the complaint, since I simply drew a mental picture of the chain of symptoms and make reference to an organism which I believe to be intimately associated with the causation of those symptoms. The incubation period of the disease is apparently from about ten days to a fortnight in the case of a natural infection, while in experimental animals it may be somewhat shorter. The symptoms may be presented either as a simple nasal and conjunctival catarrh in which the most obvious feature is a periodic sneezing, accompanied by photophobia and excessive lachrymation, without, at this stage, any discharge, to terminate in the case of resistant animals in resolution, or in those whose defences are not so good to be followed by a muco-purulent discharge from the eyes and nose, and an extension of the infection resulting in a pharyngitis and laryngitis. This state of affairs may persist for several days to terminate in the recovery of the animal if its strength can meanwhile be maintained, or the infection may extend, involve the pulmonary parenchyma, and cause the death of the patient from an acute croupous pneumonia. In those cases in which the third and most fatal phase is seen, the two previously mentioned stages are invariably its precursors. In a few cases the disease has been seen to run an extremely rapid course, embracing all three phases, and death has resulted in from four to five days of the onset of the symptoms. Such rapidly fatal cases are, however, not common, and I have only seen them in kittens of the more delicate breeds. In all stages of the disease food of any kind is refused, and the utmost difficulty is experienced in maintaining the animal's strength. As I have said before, it is very uncommon to find animals suffering from this disease affected with diarrhœa; on the contrary, there is a marked tendency towards constipation. On post-mortem examination the lesions are found to be confined to the respiratory tract. There is marked inflammation of the pharynx, larynx, and trachea, and when the lungs are affected there is a typical croupous pneumonia. I was able to isolate the organism under discussion in pure culture from the smaller bronchi, and sometimes from the trachea in almost every case in which the disease was seen in its early stages. In the pneumonia cases I was invariably able to recover the organism from the lungs, and in advanced cases from the heart blood. The agglutinating and complement building titres of the blood of affected animals has, so far as I have been able to ascertain, always been much higher than that of the blood of apparently normal controls, but much work remains to be done in that connection. As I stated in my preliminary report, the organism is a short bacillus varying in length from 1·5mm. to 2·5mm. by about 3 mm. in breadth. It does not show progressive motility, is an ærobe, and does not stain by Gram's method. On many solid media old cultures show a yellow colouration, most marked at the edges and gradually extending towards the centre. In the sugar media (lactose, glucose, maltose, saccharose, raffinose, arabinose, mannite, dulcite, adonite, dextrin, leavulose, and galactose), a slight alkalinity is produced in 24 hours at 37 centigrade, and in 48 hours there is a marked alkaline reaction. It has been found possible to transmit the disease experimentally to healthy cats, even by an injection into the nostrils of a saline suspension of the organism.

I have here an agglutination test, and a complement fixation test put up with the blood of a cat suffering from influenza, and from a normal control.

The agglutinating titre of the diseased cat is in this case 1 in 400, while that of the control is 1 in 20.

The complement fixation titre is ·02, while that of the healthy cat is *nil*.

I have also some slides of the organism under discussion. One is stained with Kühne's blue, one with Lœffler's blue, and one with dilute fuchsin.

I had hoped to be able to show you a kitten suffering from this disease, but it unfortunately developed pneumonia yesterday, and died this morning.

DISCUSSION.

The PRESIDENT: Before we open the discussion, I should like to ask you if you have ever compared this with cat distemper, and have you ever found this organism in cat distemper.

Mr. BUXTON replied that he did some work relating to cat distemper some time back, but was not able to come to a satisfactory conclusion. Circumstances compelled him to leave it over for a while, but he might say that in cases of cat distemper he had not found this organism. He could also say it was not an ordinary inhabitant of the respiratory passages of the cat.

Prof. WOOLDRIDGE, who was then invited by the President to open the discussion, remarked that he had been very interested indeed to hear Mr. Buxton's description of this condition and his investigations concerning it, but he must admit that in some respects he still had misgivings. In the first place he seemed to have started with the preconceived notion that there was a cat influenza as distinct from feline distemper. Personally, although he had had pass through his hands a large number of cats affected with a catarrhal fever

which might take various forms and manifestations, he had never yet been able to satisfy himself that clinically they could be differentiated into these two separate and distinct diseases. Mr. Buxton told them that this organism which appeared to have some definite connection with the disease in question could not be found in cases of cat distemper, but he should like to know how many true cases of feline distemper he had been able to examine, since it seemed to him from the remarks he had made the investigations he had made in connection with cat distemper were concluded before he undertook this present work. At all events he gathered that the work had not been going on simultaneously, and the comparisons did not appear to have been easily made except from memory. For his own part he was not convinced that it was a separate or distinct disease. He thought the better plan would be to call it contagious catarrhal fever in the cat. If this did prove to be a separate and distinct disease and this organism should be proved to be the cause, then he said they were on the high road to some still more important discoveries in regard to preventive inoculations or curative serums. He should also like to hear Mr. Buxton's views with regard to the possibility of the transmission of this disease. He thought there were some forms of catarrh that cause temporary inconvenience in the human subject for instance, but which did not cause the pronounced nasal catarrh they got in the human being. He desired to congratulate Mr. Buxton very heartily on the valuable work he was doing in this direction, and he hoped he would be able to show them definitely by experiments and clinical investigation that there were two distinct diseases, that he had got the means of differentiating them, and that he would be able to show them how they could clinically distinguish them, but in the meantime he was not prepared to admit that there were two diseases.

Mr. ANGWIN, called upon by the President, did not think he had much to say on this subject of cat distemper, except that he had listened to the remarks of the essayist with great interest, and had been delighted with the specimens he had shown them that afternoon; and he only hoped that at some future date they might be able to hear more of the subject. He also hoped his theory would turn out to be correct, and that he would be able to make some practical use of his investigations, and give them some vaccine or treatment which would prove a perfect cure for the violent nasal discharge they got in these cases.

Mr. BURT would like Mr. Buxton to tell them what difference there was in the clinical symptoms of cat distemper and cat influenza, because he had seen a large number of cats at different times, and he had never been able to say whether they had distemper or influenza. If the symptoms they had heard that afternoon were not those of cat distemper then he did not know what cat distemper was.

Mr. SIMPSON had never been able to thoroughly differentiate clinically between the different forms of catarrh in the cat, and he could only re-echo the hope that they would get a cure for these troubles.

Mr. CAUDWELL thought distemper, influenza and diphtheria were all very much alike, and with regard to the transmission of the diseases he had never known a human being take it from the cat. It might be that they did, but he had never known of such a case.

Mr. MACCORMACK on being asked by the President for his views, observed that he desired first to thank Mr. Buxton for his short but very able paper. Continuing, he was going to take an opposite view to several of the gentlemen who had spoken—he did think there were two diseases, and that cats suffered from influenza and distemper. They might ask immediately what were the symptoms. He was not going to give them that afternoon. It was simply a humble opinion of his own, but he thought perhaps that there were some present who would also agree that there were two distinct diseases. It was very hard to differentiate between them he admitted, but he thought Mr. Buxton was on the right track, and if he could only get an antitoxin or vaccine it would help them very materially, because as they knew the cat was a most difficult patient to handle. They not only bit and scratched, but one could not get them to take any nourishment or medicine like they could other animals.

Mr. ARCHER. It might be said, perhaps, that it did not matter much whether it was one and the same disease or not, but it might do in the treatment of it as it was quite possible that what might be effectual in one complaint would not have any effect whatever in the other. His own impression was that cat influenza was very frequently called cat diphtheria. He was inclined to believe himself, from clinical observations more than anything else, that there was a cat distemper which was really a distinct disease, but he was not prepared to say positively that it was so. With regard to its being transmissible to the human being he was quite convinced that it was, especially in the case of children, and what was more important when cats got these throat symptoms, although it did not give diphtheria to the human being, it did convey to them a septic condition of the throat which people became very alarmed at. It was very important that they should know all they could about this subject, if only that they might be able to assure people whether there was any chance of their getting diphtheria from the cat. Personally he invariably treated it as a communicable disease, and told his clients to isolate as far as possible. With regard to treatment he generally tried sulphurous acid.

Prof. WOOLDRIDGE : What doses?

Mr. ARCHER : Five minims. Another thing he gave was sulphite of magnesia. He was treated with that himself for diphtheria.

Mr. BURT : You have not choked any cats with it yet, I suppose. (Laughter).

Mr. ARCHER : No. He used inhalations of iodine and eucalyptus or terebene in addition to internal medicines.

Mr. ANGWIN. If he might be permitted to make another contribution to the discussion, only last month he was called in to a case by two maiden ladies. These ladies had never had an animal in their house before, but they procured a black cat, and the cat was suddenly taken with the most fearful sneezing. Within a week both ladies were suffering from sore throats. They blamed the cat. He pooh-poohed the idea, but it might have been correct.

Mr. BURT asked Mr. Buxton if he had kept any record of how many fatal cases he had had. Personally he had treated a large number of cats in the course of his experience, but as far as he could remember he had only had about three die from influenza.

The PRESIDENT desired to thank Mr. Buxton very much for his very interesting paper and the information he had given them. He was very much to be congratulated on being the first in the field in this matter, and he was doing an excellent work in an entirely new direction, and on a subject that was really well worth studying. There were several types of disease which had been called cat distemper, but for some years now he had come to look upon this disease described by Mr. Buxton as something different. During the last five or six years he had made a very careful study of the matter, and he was very pleased when he read that Mr. Buxton had taken it up from the pathological side, and that he had actually discovered something which tended to confirm his own views. Mr. Buxton told him that when he had his place full of cats these outbreaks occurred in exactly the same way; and that had been his experience. But he could not understand his freedom from losses because he had found it an excessively fatal disease

among kittens, and when death did occur it occurred very rapidly. If the infection was a virulent one no treatment was of any use. Further, the symptoms were not those of ordinary cat distemper. There was the peculiar dribbling from the mouth and the sneezing which followed, and then when once a recovery began to take place the extraordinarily rapid recovery was quite different from that of cat distemper, where they might have the sneezing go on for a year or two Then, again, in this influenza as he called it, instead of getting a heavy purulent discharge from the eyes and nose as in distemper, they would get a sudden lesion in the lung forming a croupous pneumonia from which the cat generally died in from twenty-four hours to two or three days.

Prof. WOOLDRIDGE; You get the same thing in distemper.

The PRESIDENT: No, not the same acute symptoms. You will have the lung symptoms going on for a week or a fortnight, perhaps. He was satisfied in his own mind that this disease was something quite different from distemper, as he had always recognised it. He confessed he knew nothing about the pathology of the disease, and he was very glad somebody had taken that up, because if they knew what the organism was, and could prove that that organism was the sole cause of this particular kind of infection, they could then differentiate it from cat distemper by experimental inoculation. He hoped Mr. Buxton, in his reply, would be able to describe it from the ordinary cat distemper by giving them a list of the symptoms as they had occurred in the cases experimentally inoculated.

Mr. BURT mentioned that in Brighton for some years now there had been a cat shelter for the collection of stray cats, and that place was seldom free from this influenza, but he did not think he had ever seen this purulent discharge from the nose, and it was also very seldom that a cat died there. It was very strange that these stray cats should have the vitality to recover when the better bred animals died.

The PRESIDENT, referring to the question of the contagion passing from cats to human beings, observed that he regarded it as nonsense.

Prof. WOOLDRIDGE: That is hardly worth much in the face of positive instances is it?

The PRESIDENT: I have never been able to trace any cases myself. The cat, of all animals, is the most likely to carry an infection in its fur, but if it was merely pharyngitis I should not mind children handling the animal, that is providing, of course, that it was not tuberculous.

REPLY.

Mr. BUXTON desired to thank Prof. Wooldridge for his kind remarks. The latter seemed to be extremely anxious that he should commit himself and differentiate between distemper and influenza, but in the first place he did not know what distemper was.

Prof. WOOLDRIDGE: In that case then you cannot say that this is not distemper.

Mr. BUXTON continuing: Assuming distemper was due to a specific organism, such as that described by Ferry, he could honestly say this disease was not distemper, because *this* particular organism always produced identical symptoms, and that, he believed, was not the rule in cat distemper. Further, if cat distemper was due to an invisible virus he failed to see that this could be the organism, because it was not an ordinary inhabitant of the cat's respiratory track, and if distemper was due to a virus the organisms that were going to cause the secondary lesions must be ordinary inhabitants. The serious part of this influenza lay in the fact that the animal would not look after itself. It did not appear to suffer from any general intoxication, and the effects were purely local, whereas in distemper they certainly were not local. Animals which were suffering from distemper always showed symptoms of a more or less general intoxication, but in the case of cat influenza they had a coryza laryngitis, and the effects were purely local. Then, again, in influenza they got a high temperature at the very outset of the disease, but afterwards it was very uncommon to get a high temperature unless pneumonia supervened. In the case of a cat suffering from distemper on the other hand they had a high temperature curve that might last over several days, and this high temperature curve appeared to be produced by intoxication, and he had not seen that condition of things in cat influenza. Neither had he seen any caking of the discharge running from the eyes and nose of an animal suffering from influenza, but they got this in distemper. "Contagious catarrhal fever" would be a very good name to give the complaint, but he failed to see any great objection to "influenza." With regard to the transmission of the disease to human beings, he did not think cat influenza ever caused any serious disturbance to the human being, but that it could be transmitted he knew perfectly well, because he had had it three times himself, and his assistants had caught it twice. It was simply an irritation of the nose and eyes, causing sneezing, and some lacrimation which lasted from 24 to 48 hours, and then went off. He did not know whether it was a coincidence, but each attack he had had seemed to be worse than the previous ones.

Mr. E. WHITLEY BAKER asked Mr. Buxton whether, when he had suffered from this cat influenza, he had noticed any other human being had had it.

Mr. BUXTON: No, and I think there is no question that it was transmitted from the cats.

Prof. WOOLDRIDGE: May I be allowed to emphasise what I think Mr. Buxton means, because I know a little of the conditions under which he does his work. It has only been Mr. Buxton or his assistants who have been associated with him in the handling of the cats that have had it I understand.

Mr. BUXTON: Yes, that is so. The proportion of fatalities among his cats had only been about five per cent., but that was because he had generally had to deal with old cats, and although when he got an outbreak it generally ran through the whole lot, it was only the young cats that got it seriously.

Prof. WOOLDRIDGE remarked that if he might make a further contribution to that afternoon discussion, the conclusion he had been driven to as the result of what they had heard that day was that this disease was the same as that which he had always recognised as feline distemper, but if they must call it *influenza* then he must say that he had never seen a case of *distemper* in a cat. In that case, considering the enormous number of sick cats which he saw every year, he was driven to the conclusion that feline distemper did not exist. In other words, it amounted to practically the same thing, the disease he called distemper was regarded as influenza by the President and Mr. Buxton.

On the proposition of Mr. Angwin, seconded by Mr. Caudwell, the Secretary was directed to write to Mr. Toope, of Dover, and inform him that if he was circularising the profession in connection with his candidature for the Council, he could state that he had the support of the Southern Counties Society.

Mr. CAUDWELL subsequently handed round several interesting post-mortem specimens for inspection, and for which he was formally thanked on the proposition of Mr. Angwin, seconded by Prof. Wooldridge.

Prof. WOOLDRIDGE also proposed, and Mr Caudwell seconded, a hearty vote of thanks to Mr. Basil Buxton for his interesting paper; and a similar compliment to the President for presiding, on the motion of Mr. Angwin, seconded by Mr. Burt, brought the proceedings to a close.

A. H. ARCHER, Hon. Sec.

DISEASES OF ANIMALS ACTS 1894 TO 1911, SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange.		Sheep Scab.	Swine Fever.	
	Out-breaks (a)	Ani-mals.	Out-breaks (a)	Ani-mals.	Out-breaks (b)	Ani-mals.	Out-breaks (b)	Ani-mals.	(b)	Out-breaks (a)	Slaughtered. *
GT. BRITAIN. Week ended April 18	14	15			1	2	45	64		109	1043
Corresponding week in 1913 ...	15	15			4	8	66	112		59	956
Corresponding week in 1912 ...	15	16			1	3	60	92	2	76	945
Corresponding week in 1911 ...	21	21			8	14			2	62	328
Total for 16 weeks, 1914	292	312	11	74	30	75	1073	1966	139	1036	9813
Corresponding period in 1913 ...	215	232			54	178	1193	2485	110	605	7889
Corresponding period in 1912 ...	376	426			54	126	1717	3879	149	1015	12924
Corresponding period in 1911 ...	320	370	1	18	67	210			289	677	7187

(a) Confirmed. (b) Reported by Local Authorities. † Counties affected, animals attacked: London 1, Forfar 1.
Board of Agriculture and Fisheries, April 21, 1914

IRELAND. Week ended April 18	...	...	...	...	...	...	Outbreaks ...	3	5	32
Corresponding Week in 1913 ...	...	...	...	...	...	...	2	8	6	14
Corresponding Week in 1912 ...	...	...	...	...	...	...	4	12	9	93
Corresponding Week in 1911 ...	...	...	...	...	...	...	...	3	3	9
Total for 16 weeks, 1914 ...	1	2	65	601	...	...	37	308	88	385
Corresponding period in 1913 ...	...	...	...	...	...	...	77	238	46	259
Corresponding period in 1912 ...	1	1	...	...	...	...	31	233	83	668
Corresponding period in 1911 ...	3	3	...	...	1	2	36	216	44	732

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, April 20, 1914
NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

NORTH OF IRELAND VETERINARY MEDICAL ASSOCIATION

(NATIONAL V.M.A.—IRISH BRANCH.)

The annual general meeting was held on Friday, the 20th March, at the Belfast City Abattoir, Stewart St. Mr. J. A. Jordon, President, occupied the chair, and the following members were present:—Messrs. J. J. Ross, R. Kernohan, J. Ewing Johnston, J. McLean, A. M. Crighton and F. W. Emery.

Apologies for non-attendance were received from Messrs. W. S. Lamont, W. C. M. Smith, A. Monro, J. B. Dunlop, and Capt. Hodgkins, A.V.C.

The minutes of the last meeting were taken as read and confirmed.

REPORT OF COUNCIL.

A Council meeting was held on Thursday, 12th inst., at the Belfast City Abattoir. The President occupied the chair, and there were also present: Messrs. Ross. McConnell, McLean, Johnston, and Emery. Apologies for non-attendance were received from Messrs. W. C. M. Smith, J. Kernohan, and J. McAleer.

Your Council desire to express their deepest regret at the great loss our Association has sustained by the death of the late Mr. J. A. Thompson, J.P., F.R.C.V.S. who for many years so ably discharged the onerous duties of Treasurer to the Society. When the sad event became known your Council took steps to have the Association represented at the funeral and to send a wreath in token of the great regard in which our late colleague was held by every member. Letters of condolence were also forwarded to the widow and family in your behalf.

Owing to this very sad event it was found necessary to postpone the date of the annual general meeting.

Your Council recommend that a further subscription of five guineas be sent to the Treasurer of the International Veterinary Congress in order that the amount originally promised be paid.

It is also recommended that the sum of £2 10s. be forwarded to the Treasurer of the National Association in connection with the scheme of amalgamation.

The undermentioned members of our Association are nominated as office bearers for 1914.

President.—Mr. W. C. M. Smith, Newry.
Secretary.—Mr. J. A. Jordan, Belfast.
Treasurer.—Mr. Howard McConnell, Armagh.
Vice-Presidents.—Messrs. J. Kernohan, Ballymena; F. McRoberts, Camber.
Council.—Messrs. J. J. Ross, J. McLean, J. McAleer, J. Gregg, J. Ewing Johnston, A. M. Crighton, and J. Loughran, J.P.

On the motion of Mr. R. Kernohan, seconded by Mr. Crighton, the report of Council was adopted by the meeting.

New Member. Mr. Esmonde W. Little, M.R.C.V.S., D.A.T.I., was unanimously elected.

Mr. W. P. WALSH, M.R.C.V.S., Magherafelt, was nominated by Mr. R. Kernohan, seconded by Mr. F. W. Emery.

The meeting discussed the forthcoming election to the Council of the R.C.V.S.: the purchase of Registers for the use of the Secretary and Treasurer, and the circular letter of the Hunting Memorial Committee. In connection with the latter it was proposed by Mr. Ross,

seconded by Mr. Kernohan, and passed, that the Treasurer be authorised to forward the sum of two guineas on behalf of the Association.

The PRESIDENT invited the members to make an inspection of the new abattoir, and in conducting them over this very fine and splendidly equipped building gave a very lucid exposition of the methods of procedure adopted in connection with the various works carried on within its portals.

The meeting terminated by a very hearty vote of thanks to the retiring President for the very able manner in which he had conducted the business of the Association during his term of office.

Medical Protest Against the Dogs Bill.

The following is the text of the memorial which was addressed to the Home Secretary, before the second reading of the Dogs Protection Bill, by some of the most eminent physicians, surgeons, and research workers in the country.

"We desire to express to you our strong conviction that the Dogs Protection Bill, which was put down for second reading on Friday, 17th inst., would inflict very severe injury, not only on medicine and surgery, but also on the study of the diseases of animals. We think that we have some right to ask you to oppose this attack on the advancement of medical science and practice; especially as the Final Report of the Royal Commission on Vivisection does not advise the prohibition of experiments on dogs. We are absolutely certain that such experiments are necessary for the complete study of many problems of physiology, pharmacology, and pathology."—*The Times.*

The Spectrum of Alkaloids.

The application of the spectroscope to the elucidation of the structure of the alkaloids as well as to their detection and estimation has an obvious interest for medical men. The ultra-violet end of the spectrum is concerned, for there the absorption phenomena of alkaloid solutions are displayed. Ultra-violet rays are employed, and the prisms and lenses are made of quartz, as the ultra-violet rays are cut off by glass. The alkaloids have very characteristic spectra, and the lines of selective absorption can be photographed. The minutest quantities of alkaloids can be detected, and a permanent impression can be kept of the records which are always available for reference.

OBITUARY

EDWARD COOPER SMITH, M.R.C.V.S., Hollist Stud Farm, Midhurst, Sussex. Graduated, Lond: April, 1865

Mr. Smith died on April 15th, at Eastbourne, from malignant disease of the cæcum. Aged 69 years.

HENRY HOWSE, M.R.C.V.S., Newland, Lincoln. Lond: April, 1856.

Death took place on April 16th, from senile decay. Aged 80 years.

GEORGE SMITH, M.R.C.V.S., Tunstall, N. Staffs. Lond: April, 1873.

Death occurred on April 16th, at Station Road, Tunstall, from cardiac disease (valvular), at the age of 63.

ALF. PRUDAMES, M.R.C.V.S., Elm Lodge, Linslade, Leighton Buzzard. Lond: May, 1861.

Mr. Prudames died on April 20th, at the age of 76, from old age: influenza, bronchial pneumonia.

PARLIAMENTARY.

PURE MILK.

In the House of Commons on Wednesday, April 22.

Mr. ASTOR called attention to the unsatisfactory state of legislation and administration with reference to the supply and sale of milk and cream in the United Kingdom; and moved, "That fresh legislation is needed to control the supply and sale of milk and cream in the United Kingdom, and that the existing laws should be more thoroughly administered." He said his object was to try to ascertain the intentions of the Government with regard to further milk legislation. If the public realised the necessity of having pure milk they could get it, and get it at a reasonable price. They were told that if they had further milk legislation there was a prospect that the price might be raised. He believed good milk was cheap milk and bad milk was dear milk. Milk was a good medium for transmitting disease, and milk which produced disease was not cheap at any price. The first essential was that the milk must be pure. Pure milk was by far the cheapest and most nutritive food on the market. Yet they had cases of cows so far advanced in disease that they could not stand, and milk from those cows was sold to the public. Ten per cent. of the milk which came to London was tuberculous, which meant that on one day in ten people who drank milk drank tuberculous milk. They desired uniform legislation and regulations throughout the country dealing with dirt, the temperature at which milk was kept, and the age of the milk, which were the three main factors with regard to disease in milk. He wished also to see the compulsory classification of milk into three grades—(*a*) the best sort of milk, from herds tested and guaranteed free from disease, which could be given with absolute confidence to children in its raw state; (*b*) safe milk, which adults could drink with impunity, but which having a larger number of bacteria than class (*a*) might not perhaps be suitable for young children; and (*c*) all milk which on its merits could not come in either of the other classes. He had had a sample of the milk supplied to the House of Commons analysed and found it was the rare and fruity vintage; for the sample contained 72 million bacteria per cubic centimetre. The danger of tuberculous milk to adults might be exaggerated, but it was difficult to exaggerate the danger to children. It was their interest to build up a healthy race and to see that the children had a fair chance when they started in life. They must see to it that the milk given yielded nourishment and did not give disease and even death to children.

Mr. HILLS seconded the motion. He emphasised the importance from the national point of view, of Parliament taking adequate steps to ensure a pure milk supply, and pointed out that the schemes adopted in New York with this object in view had reduced infantile mortality by nearly 50 per cent. in three years.

The debate was continued by Sir R. Baker and Messrs. Allen, Hume-Williams, H. Hope, and J. F. Mason.

Mr. HERBERT SAMUEL in the course of his reply said:—There was no doubt that the measures so far taken to protect the milk supply were totally inadequate to safeguard the public health, and it was essential that fresh measures should be taken. Any Bill introduced should, in his opinion, substitute for various codes now administered by local authorities the uniform provisions of a general statute. The Bill he hoped to introduce shortly—a Milk and Dairies Bill—would be much more restricted than its predecessors, but would still, he hoped, be effective. He did not propose that milk sellers should be licensed, but he proposed to take full powers to trace back tuberculous milk to its source, and to deal effectually with diseased cows. He was anxious not to disturb the dairying industry, or to raise the price of milk, and the Bill would be framed in that spirit.